Remarks

The Office Action mailed May 17, 2004 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-20 are now pending in this application, of which claims 1, 2, 3, 7, 8, 10, 12, 16 and 17 have been amended. It is respectfully submitted that the pending claims define allowable subject matter.

The objection to claims 2, 3, 7, 8, 12, 16 and 17 due to an informality is respectfully traversed. Claims 2, 3, 7, 8, 12, 16 and 17 have been amended as suggested in the Office Action. Applicants accordingly request the objection to claims 2, 3, 7, 8, 12, 16 and 17 be withdrawn.

The rejection of claims 1 and 3-9 under 35 U.S.C. § 102(b) as being anticipated by Tessier et al. (U.S. Patent No. 5,132,488) is respectfully traversed.

Tessier et al. describe a telecommunications cable (40) having a jacket (42) including inwardly extending helical projections (44) to space pairs (14) of conductors (16) from one another in adjacent recess regions (48). The regions (48) collectively define a cloverleaf shape for the conductors (16). See Tessier et al, Figure 1. Figure 2 illustrates a similar embodiment to Figure 1 with a slightly different shape of the jacket recesses, and Figure 3 illustrates a third embodiment of a cable jacket including spokes (68) creating pie-shaped recesses. Each of the embodiments of Figures 1-3 maintain the pairs of conductors at an equal distance from one another to minimize cross talk between the pairs.

Notably, none of the embodiments disclosed by Tessier et al. include a cylindrical core, and Tessier et al. nowhere discloses that the configuration of the jacket prevents relative movement of the jacket with respect to a core as does the present invention. Considering Figures 1-3 of Tessier et al., even if a core was placed in the center of the jacket between the projections of the jacket, there is no structure that would prevent the jacket from sliding relative to the core.

Claim 1 has been amended for clarity and now recites a cable comprising "a cylindrical core comprising at least one twisted pair of insulated wires," and "a jacket surrounding said core, said jacket comprising at least one spline projecting inward from an inner surface of said jacket, wherein at least a portion of said twisted pair is positioned between said spline and a center of said core, thereby preventing relative movement of said jacket with respect to said core."

For the reasons set forth above, it is respectfully submitted that Tessier et al. neither describes nor suggests the cable of claim 1. Claim 1 is therefore submitted to be patentable over Tessier et al.

Claims 3-9 depend from claim 1, and when the recitations of claims 3-9 are considered in combination with the recitations of claim 1, claims 3-9 are likewise submitted to be patentable over Tessier et al.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1 and 3-9 be withdrawn.

The rejection of Claims 1 and 2 under 35 U.S.C. § 103 as being unpatentable over Koyasu et al. (U.S. Patent Application Publication 2003/0205402 is respectfully traversed.

The Office Action cites Figure 28 of Koyasu et al. as disclosing relevant aspects of the present invention. Applicants respectfully disagree.

Koyasu et al. disclose in Figure 28 a LAN cable (551) including a windmill filler (553) which divides the cross section of the cable into sectors with partition walls (571). A twisted pair (555) of insulated wires (579) is located in each of the sectors of the filler (553), with each of the twisted pairs separated from one another by the partition walls (571) to reduce crosstalk. The outer periphery of the filler (553) is covered with a jacket (557), but nowhere do Koyasu et al. describe or illustrate that the jacket (557) or the filler (553) includes any structure which would prevent relative movement of the jacket (557) and the filler (553) in use of the cable. As

such, it is respectfully submitted that Koyasu et al. disclose no more than what is described in the background section of the present application. See paragraph 4 of the present specification.

Claim 1 recites a cable comprising "a cylindrical core comprising at least one twisted pair of insulated wires," and "a jacket surrounding said core, said jacket comprising at least one spline projecting inward from an inner surface of said jacket, wherein at least a portion of said twisted pair is positioned between said spline and a center of said core, thereby preventing relative movement of said jacket with respect to said core."

It is respectfully submitted that Koyasu et al. is not suggestive of the present invention. As noted above, the windmill filler of the Koyasu et al. cable and the jacket of the cable lack any structure that would prevent relative movement of the jacket with respect to the cable, and contrary to the assertion otherwise in the Office Action, Koyasu et al. suggest no desirability of including such structure in the cable. In fact, Koyasu et al. does not recognize the particular problem toward which the present invention is directed, namely to prevent relative movement of the cable jacket with respect to the core and preserve headroom of the cable without introducing additional cost and complexity to the cable which may impair its flexibility. As presently understood, Koyasu et al. only address the problem of the twisted pairs in the cable moving relative to one another in the cable. Thus, the assertion in the Office Action that it would have been obvious to make the spline of Koyasu et al. as an integral part of the jacket to prevent the spline from moving with respect to the jacket is respectfully traversed. Absent some reason why this arrangement may be advantageous, which is not found in the Koyasu et al. reference, there is no motivation for one of ordinary skill in the art to make the proposed modification to the Koyasu et al. cable.

Moreover, the citation of case law in the Office Action for the proposition that forming in one piece an article which has formerly been formed in pieces and put together involves only routine skill in the art overlooks the express teaching of the Koyasu et al. reference. In paragraph 197, Koyasu et al. state that the jacket of the cable is applied only after the twisted

pairs are accommodated and arranged in the windmill filler. If the splines were integrally formed with the jacket of the Koyasu et al. cable as the Office Action supposes, inserting the twisted pairs into the interior of the cable jacket would be frustrated, if not entirely prevented. Thus, given a fair reading of the Koyasu et al. reference, the proposed modification of the Koyasu et al. cable does not appear to be feasible.

For the reasons set forth above, claim 1 is submitted to be patentable over Koyasu et al.

Claim 2 depends from claim 1, and when the recitations of claim 2 are considered in combination with the recitations of claim 1, claim 2 is likewise submitted to be patentable over Koyasu et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1 and 2 be withdrawn.

The rejection of claims 10-16 and 18-20 under 35 U.S.C. § 103 as being unpatentable over Gareis (U.S. Patent Application Publication 2003/0230427) in view of Patterson (U.S. Patent No. 476,484) is respectfully traversed.

The Office Action cites Figures 6B and 6C of Gareis as disclosing relevant aspects of the present invention. It is clear from the text of Gareis, however, that Figures 6B and 6C illustrate the problem to which the Gareis invention is directed, namely prevention of the twisted pairs from moving relative to one another within the cable to mitigate crosstalk between the pairs. See Gareis paragraphs 13-16. Gareis nowhere recognizes the problem to which the present invention is directed, namely to prevent relative movement of the cable jacket with respect to the core and preserve headroom of the cable without introducing additional cost and complexity to the cable which may impair its flexibility. Not surprisingly, then, the Gareis cable includes no structure in the cable jacket or filler which would prevent relative movement thereof and address this issue.

Patterson describes a low capacity cable including longitudinal ribs (b) integral with a sheath and bearing against the core. The ribs are provided to prevent the sheath from buckling

when the cable is bent. Patterson nowhere describes that the ribs are capable of preventing relative movement of the sheath with respect to the core, and the illustrated structure of the ribs in the figure of Patterson is not capable of serving this purpose. The ribs are rounded and in contact with a smooth outer surface of the sheath. Presumably, the ribs would slide over the outer surface of the core as the cable is handled.

It is therefore apparent that neither Gareis nor Patterson describe or suggest a cable having a jacket in which relative movement of the jacket with respect to a core is prevented. As neither of the cited references recognize this problem or include any structure to address this issue, it is respectfully submitted that a prima facie case of obviousness has not been established to combine the references in the manner suggested in the Office Action. Rather, the rejection appears to be an impermissible hindsight reconstruction of the invention combining isolated teachings of prior art references in an effort to deprecate the instant claims.

Claim 10 recites a cable comprising "a core comprising a central core filler and a plurality of twisted pairs of insulated wires extending about said core filler" and "a jacket surrounding said core, said jacket comprising a round inner surface and at least one spline projecting inward from said inner surface, wherein said at least one spline is adapted to prevent relative movement of said jacket and core without separating one of said plurality of twisted pairs from another of said plurality of twisted pairs."

For the reasons set forth above, Gareis in view of Patterson neither describes nor suggests the cable recited in claim 10, and claim 10 is accordingly submitted to be patentable over Gareis in view of Patterson.

Claims 11-16 and 18 depend from claim 10, and when the recitations of claims 11-16 and 18 are considered in combination with the recitations of claim 10, Applicants submit that claims 11-16 and 18 are likewise patentable over Gareis in view of Patterson.

Claim 19 recites a cable comprising "a round core comprising a central core filler and a plurality of twisted pairs of insulated wires extending about said core filler" and "a round jacket surrounding said core, said jacket comprising an inner surface and a plurality of splines projecting inward from said inner surface, wherein said plurality of splines are adapted to prevent relative movement of said jacket and core without separating said plurality of twisted pairs from one another."

Neither of Gareis or Patterson, considered separately or in combination, describe or suggest a cable having a jacket comprising an inner surface and a plurality of splines projecting inward from the inner surface, wherein the plurality of splines are adapted to prevent relative movement of the jacket and core without separating the plurality of twisted pairs from one another. Claim 19 is therefore submitted to be patentable over Gareis in view of Patterson.

Claim 20 depends from clam 19, and when the recitations of claim 20 are considered in combination with the recitations of claim 19, claim 20 is likewise submitted to be patentable over Gareis in view of Patterson.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 10-16 and 18-20 be withdrawn.

The rejection of claim 17 under 35 U.S.C. § 103 as being unpatentable over Gareis in view of Patterson and further in view of Tessier et al. is respectfully traversed.

Claim 17 depends from claim 10, which is submitted to be patentable over Gareis in view of Patterson for the reasons set forth above. It is respectfully submitted that Tessier et al. does not cure the deficiencies of Gareis and Patterson with respect to claim 10.

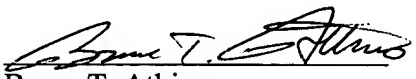
As noted above, Tessier et al. nowhere discloses that the configuration of the jacket of the Tessier et al. cable prevents relative movement of the jacket with respect to a core as does the present invention. Thus, none of Gareis, Patterson, or Tessier et al. describe or suggest this aspect of the invention. Accordingly, claim 10 is submitted to be patentable over Gareis in view

of Patterson and further in view of Tessier et al. When the recitations of claim 17 are considered in combination with the recitations of claim 10, claim 17 is likewise submitted to be patentable over Gareis in view of Patterson and further in view of Tessier et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claim 17 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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